

## NOTES ON NOCTUIDÆ.

Collected by Mrs. M. D. Nicholl, in Alberta, British Columbia, and the Washington Forest Reserve, in the years 1904-5-7.

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The numbers given are those in Dyar's Catalogue of N. American Lepidoptera, and only the more local and interesting species are referred to. The specimens are in the British Museum.

## AGROTINÆ.

2407. *Heliothis vaccinia*, H. Edw.

B. C., 1905, Upper Skagit, 1 ♀. U. S. A., 1905, Robinson, 1 ♀; Washington Forest Reserve, 1905; Washington Pass, 1 ♂, 1 ♀; Horseshoe Pass, 1 ♀.

2405. *Heliothis honesta*, Grote.

B. C., 1905, Upper Keremeos, 1 ♂; Pasayten, 1 ♂.

1767. *Agrotiphila maculata*, Smith.

Alberta, 1907, Mt. Athabasca, 3 ♂'s, 2 ♀'s; 1905, Laggan, 1 ♂. B. C., 1904, Lake O'Hara, 1 ♀.

1764. *Orosagrotis incognita*, Smith.

Alberta, 1907, Brobokton Creek, 1 ♂.

1560. *Porosagrotis orthogonia*, Morr.

Alberta, 1907, Prairie, 1 ♂.

1734. *Euxoa colata*, Grote.

Alberta, 1907, Wilcox Peak, 1 ♂.

1732. *Euxoa nordica*, Smith.

Alberta, 1907, Kootenay Plains, 1 ♀.

1431. *Episilia littoralis*, Pack.

Alberta, 1907, Kootenay Plains, 4 ♀'s.

1417. *Aplectoides speciosa*, Hübn., var. *arctica*, Zett.

Alberta, 1907, Wilcox Pass, 1 ♂.

*Protagrotis Nicholle*, n. sp.—Head, thorax and abdomen brown, mixed with gray-white; tarsi with slight pale rings. Fore wing fuscous-brown, mixed with gray-white; sub-basal line represented by slight dark marks below costa and cell; antemedial line dark, defined by white on inner side, erect, angled outwards in submedian fold and above inner margin and inwards on vein 1; claviform slightly defined by blackish at

extremity; orbicular represented by some white scales; reniform defined by white on outer edge, otherwise undefined; a very indistinct sinuous dark medial line; postmedial line indistinct, dark, slightly defined by whitish on outer side, bent outwards below costa, then dentate, incurved below vein 4, some white points beyond it on costa; subterminal line whitish, slightly defined by fuscous on inner side, waved, excurved below vein 7, angled inwards in discal fold, and incurved below vein 3; a slight dark terminal line; cilia fuscous, intersected with whitish. Hind wing grayish, nearly uniformly suffused with fuscous-brown; a slight dark discoidal lunule; cilia white, with a slight brown line through them; the under side whitish, irrorated with fuscous-brown, a slight discoidal lunule, indistinct sinuous postmedial line and diffused subterminal line.

Alberta, 1907, Wilcox Pass, 3 ♀'s; Brobokton Creek, 1 ♀. B. C., 1904, Simpson R., 1 ♂ type; Glacier, 1 ♀. Expanse, 44 mm. In the collection of Prof. J. B. Smith is a specimen from Washington, Mt. Ranier, which, he informs me, is much brighter in colour.

## HADENINÆ.

1936. *Anarta impigens*, Wlk.

Alberta, 1907, Wilcox Pass, 2 ♂'s; Brobokton Creek, 2 ♂'s. B. C., 1904, Simpson R., 1 ♂.

*Anarta Staudingeri*, Auriv.

Alberta, 1907, Brobokton Creek, 4 ♀'s.

1935. *Anarta Richardsoni*, Curt.

Alberta, 1907, Wilcox Pass, 1 ♂, 2 ♀'s; Mt. Athabasca, 3 ♂'s.

1931. *Anarta melanopa*, Thubg.

Alberta, 1907, Wilcox Pass, 2 ♀'s; Mt. Athabasca, 3 ♂'s, 6 ♀'s; Brobokton Creek, 3 ♀'s. B. C., 1904, Okanagan, 2 ♂'s, 1 ♀; 1905, Ashnola, 1 ♀. U. S. A., 1905, Washington Forest Reserve, Upper Skagit, 3 ♂'s, 1 ♀.

1915. *Lasiestra phoca*, Möschl.

Alberta, 1904, Lake Louise, 1 ♂, 1 ♀; 1907, Mt. Athabasca, 3 ♀'s; Sheep Mt., 1 ♀; Brobokton Creek, 1 ♂, 1 ♀. B. C., 1904, Kicking Horse Pass, Yoho Peak, 1 ♀; Mt. Assiniboine, 2 ♀'s; Lake O'Hara, 1 ♀.

1910. *Lasiestra uniformis*, Smith.

B. C., 1904, Mt. Assiniboine, 1 ♀.

*Lasionycta Rainieri*, Smith.

B. C., 1904, Kicking Horse Pass, Yoho Valley, 1 ♂.

1998. *Miselia ingravis*, Smith.

Alberta, Wilcox Pass, 1 ♀. B. C., 1907, Vancouver I., Cowichan Lake, 1 ♂.

*Miselia carbonifera*, n. sp.—♀. Head, thorax and abdomen fuscous-black, mixed with some gray; frons with black bar above; tarsi slightly ringed with white. Fore wing fuscous-black, irrorated with gray; sub-basal line represented by diffused black striæ from costa and cell; antemedial line slight, black, somewhat sinuous and oblique; claviform small, defined by black; orbicular slightly defined by black and irrorated with whitish, irregularly rounded; reniform indistinctly defined by black, its annulus represented by a white line on outer side, curved inwards at lower angle of cell; postmedial line very indistinct, black, defined on outer side by some white scales towards costa, bent outwards below costa, then dentate, excurved to vein 4, then incurved, some white points beyond it on costa; subterminal line represented by some white scales defined on inner side by black lunules, slightly excurved below vein 7 and angled outwards at veins 4 and 3; a terminal series of slight black lunules; cilia intersected by whitish at the veins. Hind wing fuscous-black, mixed with gray; a fine black terminal line; cilia whitish, mixed with black; the under side with faint blackish discoidal spot and indistinct diffused curved postmedial line.

Alberta, 1907, Wilcox Pass, 2 ♀ type. Expanse, 50 mm.

There is a worn female of a closely-allied unnamed species in the British Museum from N. Siberia, Yerkhoiansk, it appears to be most nearly related to *M. mystica*, Smith.

#### CUCULLIANÆ.

*Eumichtis maida*, Dyar.

B. C., 1904, Glacier, 1 ♀.

*Sympistis Zetterstedti*, Staud.

Alberta, 1907, Mt. Athabasca, 1 ♂. B. C., 1904, Kicking Horse Pass, Yoho Valley, 1 ♀.

The specimen recorded as *S. lapponica* in Cat. Lep. Phal., VI, p. 416, belongs to this form.

Var. *labradoris*, Staud.

Alberta, 1904, Lake Louise, 1 ♂, 1 ♀; 1907, Mt. Athabasca, 1 ♂, 1 ♀; Wilcox Peak, 1 ♂. B. C., 1904, Lake O'Hara, 1 ♂, 1 ♀; Mt. Assiniboine, 1 ♂.

*Sympistis coclei*, Dyar.

Alberta, 1907, Brobokton Creek, 1 ♀.

Closely allied to *S. funesta*, Payk., and not a *Homohadena*.

ACRONYCTINÆ.

2260. *Calamia tranquila*, Grote, var. *viridula*.

U. S. A., Washington Forest Reserve, 1905, Early Winter Creek, 1 ♀.

2423. *Eutrichopis nexilis*, Morr.

B. C., 1904, Lake O'Hara, 1 ♂; 1907, Sheep Mt., 1 ♀. U. S. A., Washington Forest Reserve; 1905, Washington Pass, 1 ♀.

CATOCALINÆ.

2761. *Drasteria annexa*, H. Edw.

Alberta, 1904, Banff, 1 ♀.

2755. *Drasteria crassiuscula*, Haw.

B. C., 1904, Greenwood, 1 ♂, 1 ♀; L. Okanagan, Penticton, 2 ♀'s, 1905, 1 ♂; Ashnola, 2 ♂'s, 2 ♀'s; Up. Keremeos, 1 ♀.

PLUSIANÆ.

2492. *Plusia Californica*, Speyer.

Alberta, 1907, Bear Creek, 1 ♀. B. C., 1905, Ashnola, 3 ♀'s.

2526. *Plusia speciosa*, Ottoleng.

B. C., 1905, Pass D. Hope, 2 ♂'s. Identified by Dr. Ottolengui.

2502. *Plusia octoscripta*, Grote.

B. C., 1905, Pass D. Hope, 1 ♀. U. S. A., Washington Forest Reserve, Early Winter Creek, 2 ♀'s.

2512. *Plusia angulidens*, Smith.

U. S. A., Washington Forest Reserve, 1905, State Creek, 1 ♀.

*Plusia orophila*, n. sp.—Head and thorax blue-gray, mixed with some brown and black; palpi mostly black; tegulæ with diffused black medial line; tarsi black, ringed with white; abdomen gray, tinged with reddish-brown. Fore wing blue-gray, slightly irrorated with black, the terminal area tinged with reddish-brown; sub-basal line black, slightly defined by white on outer side, excurved below costa and ending at vein 1;

antemedial line obsolete on costal half, white, nearly straight and oblique from median nervure to inner margin; medial area black-brown from cell to inner margin; claviform absent; orbicular with faint whitish annulus, with gray centre, slightly defined by black above, round; reniform with whitish annulus, its inner edge straight and oblique, defined on each side by black, its outer concave at middle with some black in upper part and beyond middle; a U-shaped silvery-white mark filled in with gray below median nervure, its inner arm bent inwards; postmedial line double, filled in with whitish, slightly excurved below costa, oblique to vein 5, then slightly incurved; subterminal line absent; a terminal series of slight, black lunules, defined on inner side by gray lunules; cilia gray, mixed with brown and with series of blackish spots. Hind wing orange-yellow; some brown suffusion at base; a slight discoidal striga; the terminal area black-brown, narrowing to tornus; cilia chequered brown and white, and with brown line through them; the under side with the costal area slightly irrorated with brown, traces of a curved postmedial line.

Alberta, 1907, Brobokton Creek, 6 ♂, 2 ♀ type. U. S. A., Washington Forest Reserve, 1907, Early Winter Creek, 1 ♂. Expanse, 34-40 mm.

A specimen of this species was identified by Dr. Ottolengui as *P. diasema*, Boisd.; this, however, which is found in N. Europe and Asia, and in America, from Greenland to Labrador, has the head, thorax and fore wing much more strongly tinged with red-brown, the last with the antemedial line excurved below the cell, the stigma more V-shaped, with a slight tail or point beyond its lower extremity; the hind wing with the terminal area reddish-brown. The record from Colorado probably refers to the new species.

2528. *Plusia sacconi*, Grote.

Alberta, 1907, Mt. Athabasca, 1 ♂.

2532. *Plusia parilis*, Hübn.

Alberta, 1907, Mt. Athabasca, 6 ♂'s; Wilcox Pass, 1 ♂.

2535. *Plusia alticola*, Wlk.

Alberta, Mt. Assiniboine, 1 ♀; 1907, Wilcox Pass, 2 ♂'s; Brobokton Creek, 1 ♂; Brazeau Creek, 1 ♀. B. C., 1904, Kicking Horse Pass, Hector, 1 ♂.

The type was taken by Lord Derby in the Canadian Rockies in 1845, and is quite distinct from the European *devergens*, Hübn. The record from Colorado probably refers to this species.

## NOCTUINÆ.

2782. *Syneda divergens*, Behr.

B. C., 1905, Ashnola, 1 ♂, 1 ♀.

2781. *Syneda graphica*, Hübn.

B. C., 1904, Up. Kerameos, 1 ♂; 1905, 1 ♂; Ashnola, 1 ♀.

2783. *Syneda patricola*, Wlk.

Alberta, 1904, Banff, 1 ♂; Laggan, 1 ♀. B. C., 1904, Greenwood, 1 ♀; Kaslo, 1 ♀; Up. Kerameos, 1 ♀.

2800. *Syneda athabasca*, Neum.

Alberta, 1907, Mt. Athabasca, 3 ♂'s; Wilcox Pass, 2 ♂'s, 1 ♀.

2799. *Syneda hudsonica*, Grote and Rob.

Alberta, 1904, Banff, 1 ♂; 1905, 1 ♀; 1907, Kootenay Plains, 1 ♂. B. C., 1904, Kaslo, 2 ♂'s; Greenwood, 1 ♂; Okanagan, 2 ♂'s, 1 ♀; 1905, Ashnola, 4 ♂'s.

2788. *Syneda ochracea*, Behr.

B. C., 1904, L. Okanagan, Penticton, 1 ♂; 1905, Up. Kerameos, 1 ♀.

## A NEW LEPIDOPTEROUS GALL-PRODUCER.

BY A. COSENS, M.A., TORONTO.

*Stigmatophora ceanothiella*, n. sp.—This small moth produces galls on *Ceanothus Americanus*, L.; these abnormal growths are found commonly on a main stem, but rarely on a branch. The flower cluster is sometimes entirely aborted, but usually only partly so, the lower pedicels in the cluster remaining normal.

In the majority of cases the gall is terminal, but in a few instances the stem was found to project a short distance beyond it. The gall has the relatively simple structure of a spindle-shaped enlargement of the stem. In length it varies from 10 to 15 mm., and in greatest width from 5 to 8 mm. It is roughened on the outside by the stumps of the aborted branches. On account of the shortening of the stem axis and the consequent crowding of the nodes, these branches are more numerous on a gall than on a corresponding length of normal stem. This gives the gall a gnarled surface and forms a strongly-protected case for the larva. The gall in some cases is surmounted by a tuft of leaves growing from its apex.

The aperture through which the moth escapes from the gall is made always near the upper end.

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